



## Effect of Classical Music Therapy on Blood Pressure Reduction in Hypertension Patients at Hospital

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### ABSTRACT

Hypertension is a common disease in patients due to a decrease in the physiological system, especially in the cardiovascular system. At the moment there is one non-pharmacological method that can lower blood pressure by listening to classical music. The purpose of this research is to find out the influence of classical music. The purpose of this study is to determine the effect of classical music therapy on blood pressure reduction in patients with hypertense. This research is an experimental research with cross sectional design conducted in December-February 2019 at Imelda General Hospital Medan, East Medan District. The sample in this study was hypertension patients as many as 31 people collected by consecutive sampling. Hypertension obtained by blood pressure examination and interview history of consumption of antihypertensive drugs. The results of the study obtained a sample of 31 people, namely 15 men and 16 women, and then the sample was given classical music therapy. With the result that as many as 16 samples experienced a decrease in blood pressure and 15 samples did not experience a decrease in blood pressure. Based on the results of the analysis of T-test and Chi-Square obtained the influence of classical music on the decrease in blood pressure of patients with hypertension ( $p$  value= 0.000). Then the decrease in blood pressure in patients with hypertension.

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## Pengaruh Terapi Musik Klasik Terhadap Penurunan Tekanan Darah Pada Pasien Hipertensi Di Rumah Sakit

### ABSTRAK

Hipertensi adalah penyakit yang sering terjadi pada pasien dikarenakan terjadi penurunan dari sistem fisiologis terutama pada sistem kardiovaskular. Pada saat ini ada satu metode non-farmakologi yang dapat menurunkan tekanan darah yaitu dengan mendengarkan musik klasik. Tujuan penelitian ini adalah untuk mengetahui pengaruh musik klasik. Tujuan penelitian ini adalah untuk mengetahui pengaruh terapi musik klasik terhadap penurunan tekanan darah pada pasien penderita hipertensi. Penelitian ini merupakan penelitian experimental dengan rancangan cross sectional yang dilaksanakan pada bulan Desember-Februari 2019 di Rumah Sakit Umum Imelda Medan, Kecamatan Medan Timur. Sampel pada penelitian ini adalah pasien Hipertensi sebanyak 31 orang yang dikumpulkan dengan consecutive sampling. Hipertensi diperoleh dengan pemeriksaan tekanan darah dan wawancara riwayat konsumsi obat anti hipertensi. Hasil penelitian didapatkan sampel berjumlah 31 orang yaitu 15 orang laki-laki dan 16 orang perempuan, dan kemudian sampel tersebut diberikan terapi musik klasik. Dengan hasil yaitu sebanyak 16 sampel mengalami penurunan tekanan darah dan 15 sampel tidak mengalami penurunan tekanan darah. Berdasarkan hasil analisis t-test dan Chi-Square didapatkan pengaruh musik klasik terhadap penurunan tekanan darah pasien penderita hipertensi ( $p$  value= 0,000). Maka penurunan tekanan darah pada pasien penderita hipertensi.

#### Kata kunci:

Kecemasan  
Penyakit ginjal kronik  
Hemodialisa

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## INTRODUCTION

Music therapy is a planned process, preventive in the efforts to cure patients who have motor physical, social and mental intelligence disorders. Music therapy in general aims to make one's heart and feelings happy and entertained, help reduce the burden of one's suffering, and a place of channeling one's talents. Listening to music is expected to stimulate and attract sufferers to follow the rhythm grooves that further create a relaxed, joyful atmosphere that ultimately has a positive change (Bekiroğlu et al., 2013).

This study aims to find out the effect of classical music therapy on blood pressure reduction in hypertensive patients at Imelda Pekerja Indonesia General Hospital in 2019.

Blood pressure is the force that blood causes against the wall vessels, depending on the volume of blood contained in the vessels and compliance, or the distensibility of the walls of the blood vessels (how easily they are stretched) (Amelia et al., 2018).

Hypertension disease is the silent disease because people do not know they have hypertension before checking their blood pressure (Ambarsari et al., 2020). Hypertension is the biggest culprit of stroke, both systolic and diastolic blood pressure (Kesehatan et al., 2019).

According to World Health Organization data, hypertension has attacked 26.4% of the world's population (Awalin et al., 2018). It is estimated that around 80% increase in hypertension cases will mainly occur in developing countries in 2005, from 639 million cases in 2000 is expected to be 1.15 billion cases in 2005 (Tekanan et al., 2017). According to the Ministry of Health in 2006 hypertension ranks as the second most commonly suffered disease by outpatients in Indonesia (Luh Widani et al., 2018).

In Indonesia, hypertension is a health problem that needs to be considered because the prevalence rate is quite high, hypertension cases ranked 3rd for the pattern of the 10 most diseases in outpatients in all hospitals in Indonesia with a total of 464,697 people or 2.93% (Pratama Sari et al., 2018).

The number of hypertension sufferers in North Sumatra in 2016, quite tinggi. Based on data received by Sumut Pos from the Health Office of North Sumatra Province, there were 50162 people suffering from Hypertension. In fact, the number is not entirely because 10 districts / cities namely Medan, Deli Serdang, Labuhan Batu Selatan, Tanjung Balai, North Tapanuli, Samosir, South Tapanuli Nias and North Nias have not submitted data to the Dinkes Sumut.

In Medan in 2017, there were 53,706. Compared to 2016, the number decreased by 59,855 people. It was said by the Head of Medan City Health Office, drg Usma Polita Nasution, Sunday (7/1) (Elliya et al., 2018). Head of Medan City Health Office, drg Usma Polita admitted, if the number of people with hypertension, diabetes and obesity in the last year in this city has decreased. In hypertensive diseases, in the provisional year in 2016 the number reached 59,855 people. Sementara in 2017 the number has shrunk to 53,706 people.

According to Siti Romadoni and friends in 2013 on the research on the Influence of Classical Music Therapy on Blood Pressure Reduction In Hypertensive Patients In Hospital Muhammadiyah Palembang stated classical music therapy has an influence on the decrease in blood pressure in hypertensive patients (Genisa et al., 2023). Furthermore, christiane sarayar and friends research in 2013 with his research on the Influence of

Classical Music On Blood Pressure Reduction In Pre-Hemodialysis Patients In Dahlia Blu Rsup Room (Aswad et al., 2020). Prof. Dr. R. D. Kandou Manado, stated that there is an influence of classical music on the decrease in blood pressure in pre-hemodialysis patients in Dahlia Blu Rsup Room Prof. R. D. Kandou Manado.

## METHOD

This type of research is quantitative research with research design using pseudo-experimental (Quasi-Experimental). Where this study is used to find causal relationships with the presence of interventions or certain treatments This study uses the method of pretest- posttest design by giving pretest (initial observation) before being given intervention then after being given intervention then, given posttest (final observation) back (Pratama et al., 2018).

This research was conducted at Imelda Pekerja Indonesia General Hospital. The reason researchers took the location of this study is based on the location of the researchers can be reached by researchers.

Research began from the beginning of the preparation of proposals until the preparation of research results in February 2018 to April 2019 at Imelda Pekerja Indonesia General Hospital.

Based on the calculation obtained samples as many as  $210 \times 15\% = 31$  people, so the number of samples that have been determined in the study there are as many as 31 people.

Data collection in this study, obtained by researchers according to the type of data, which primary data obtained by filling out questionnaires by patients who became samples accompanied by researchers to explain things that are less understood. Data obtained through the search of documents about the number of patients in the General Hospital Imelda Pekerja Indonesia Medan, including the number of hypertension patients at the General Hospital Imelda Pekerja Indonesia Medan.

The instrument used to obtain the data in this study is a questionnaire containing written questions that are used to obtain information from respondents based on what they know. The questionnaire used in the study is a closed ended question that has the advantage of easily directing the answers of respondents or students and is easy to process or tabulate with variations of guttman scales for knowledge.

## RESULTS AND DISCUSSION

Table 1 showed that the majority of respondents who are female as many as 16 people (51.6%), while the minoritas of respondents who are 15 people (48.4%). The majority of respondents whose age interval is 61-70 years as many as 18 people (58.06%), while the minoritas of respondents whose age interval is 51-60 years as much as 4 people (12.91 %). The majority of respondents based on elementary school education as many as 17 people (54.86%) while the minority of respondents based on UNDERGRADUATE education as much as 3 (9.67%) The majority of respondents based on the work of housewives, self-employed, Pengawai Swata as many as 10 people (32.26%), while the minority of respondents based on civil servant work as much as 1 person (3.22 %). The majority of respondents who have a family history of 14

people (45.17%), while the minoritas of respondents who do not have a family riwayat as many as 17 people (54.83%). The majority of respondents who smoked as many as 18 people (58.06%), while the minoritas of respondents who did not

smoke as many as 13 people (41.94 %). The majority of respondents who drank alcohol as many as 8 people (25.80%), while the minoritas of respondents who did not drink alcohol as many as 23 people (74.20%).

**Table 1**  
**Distribution of Respondent Characteristics by Gender, Age, Education, Occupational, Family History, Smoking Behavior, Drinking Alcohol Behavior (N=31)**

Respondent Characteristics	Frequency	percentage %
<b>Gender</b>		
Male	15	48,4
Female	16	51,6
<b>Age</b>		
51-60	4	12,91
61-70	18	58,06
71-80	9	29,03
<b>Education</b>		
Elementary School	17	54,86
Middle School	5	16,12
High School	6	19,35
Bachelor's Degree	3	9,67
<b>Occupations</b>		
Self Employed	10	32,26
Civil Servants	1	3,22
Housewife	10	32,26
Private Employes	10	32,26
<b>Family History</b>		
Exist	14	45,17
None	17	54,83
<b>Smoking Behavior</b>		
Exist	18	58,06
None	13	41,94
<b>Drinking Alcohol Behavior</b>		
Exist	8	25,80
None	23	74,20

In this study, the data obtained can be analyzed with bivariate analysis, namely to determine the Effect of Classical Music Therapy on Blood Pressure Reduction in Hypertension Patients in Imelda Pekerja Indonesia General Hospital (RSU IPI) medan in 2019.

Table 2 below shows that the incidence of hypertension after being given classical music therapy was obtained by 16 people (51.6), the probability of not being given classical music therapy as many as 15 people (48.4) and no (0) possibility.

**Table 2**  
**Cross Tabulation Influence of Classical Music Therapy On Blood Pressure Reduction In Hypertensive Patients Before (Pre) And After (Post)**

Blood Pressure Before	Blood Pressure After						Sum		P Value
	Low (<100)		Normal (110-120)		High (>140)		N	%	
	N	%	N	%	N	%			
	5	16,1	20	64,5	6	19,4	31	100	0,000
<b>Sum</b>	5	16,1	20	64,5	6	19,4	31	100	

**Table 9**  
**Effect of Classical Music Therapy on Blood Pressure Reduction in Hypertension Patients**

Chi-Square Test (X <sup>2</sup> )	Value	Degrees of Freedom (dk/df)	p-value
X <sup>2</sup> Count	8,911	DF=(2-1)x(2-1)	0,000
X <sup>2</sup> Table	9,488	2x2=4	0,05

Chi-Square test results between the variable of providing classical music therapy with hypertensive disease at Imelda Pekerja Indonesia General Hospital in 2019 obtained a value of  $p = 0.0000$ . The result is smaller than the significant level used which is  $\alpha = 0.05$ , in other words there is an influence of nursing measures influence classical music therapy on blood pressure reduction in hypertensive patients at Imelda Pekerja Indonesia General Hospital in 2019.

#### Classical Music Therapy Decision Selection

The results of the study conducted by researchers found that respondents changed perceptions about the selection of decisions to be taken after being given classical music therapy. Before (pre) the client was given classical music therapy against pressure reduction darh, the Client did not know the music therapy to be chosen as many as 15 people (48.4 %) , while after being given music therapy as many as 16 people (100%). Based on the questionnaire answers obtained data that the provision of classical music therapy is very helpful in the selection of decisions to terpi classical music health officials also influence because it does not provide classical music therapy to patients hypertension (Suaib & Dewiyanti, 2018).

Before being given classical music therapy the client is asked about what selection to take, to be given therapy to the patient.

#### Effect of Classical Music Therapy On Blood Pressure Reduction in Hypertensive Patients

Statistical test results using Chi-Square test obtained a  $p$  value of  $0.000P < 0.000$  which means the provision of classical music therapy against blood pressure reduction in hypertensive patients.

Description : Chi-Square  $< 0,000$  then there is an influence of giving Classical Music Therapy before with after based on the table above the administration of classical music therapy in hypertensive patients is very influential.

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#### CONCLUSIONS AND RECOMMENDATIONS

Based on research on "The Influence of Classical Music Therapy on Blood Pressure Reduction in Hypertensive Patients in Imelda Pekerja Indonesia General Hospital in 2019" it can be concluded that there is an influence of classical music therapy on blood pressure reduction in hypertensive patients. Based on the results of chi-square test analysts obtained the results of wilcoxon test output 0.000 which means there is an influence of classical music therapy on the decrease in blood pressure reduction in hypertensive patients. It is expected for hypertensive patients, as a means in health to improve the quality of life for families to maintain health. The results of the study can be used as input to the Hospital Imelda Pekerja Indonesia Medan to clarify to patients to be examined. It is expected that hospital employees have skills and knowledge about hypertensive disease. This is because employees' understanding of hypertension will help in providing services. Classical music therapy can be used as basic data to conduct more and more complex research by increasing the number of respondents, changing the type of research and adding variables.

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#### Conflict of Interest Statement

The authors declare that there is no potential conflict of interest in connection with the writing and publication of this article

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